

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (currently amended) A method for decoding data, said method comprising iterations with some steps (SISO1, SISO2) using windows (WID) of input data, characterized in that the method comprises, for a current window [(WID)] of a step (SISO1, SISO2) within an iteration the steps of:

Performing a forward recursion, wherein said forward recursion is initialized with a forward state metric vector (α) from [[the]] an upper stake [(STK)] of a previous window of [[the]]a same step (SISO1, SISO2) of a previous iteration, [[a]]each window [(WID)] comprising a lower and [[an]]said upper stake [(STK)], wherein the lower stake comprises a lower metric vector initialization value independent of time and the upper stake comprises an upper metric vector initialization value independent of time; and

Performing a backward recursion, wherein said backward recursion is initialized with a backward state metric vector (β) from the lower stake [(STK)] of a next window of the same step (SISO1, SISO2) of a previous iteration.

2. (currently amended) A method as claimed in claim 1, characterized in that the forward state metric vector (α) computed last is stored in an upper stake of said current window [(WID)] during the forward recursion, and the backward state metric vector (β) computed last is stored in the lower stake [(STK)] of said current window [(WID)] during the backward recursion.

3. (currently amended) A method as claimed in claim 1, characterized in that all [[the]] windows [[(WID)]] of a step (SISO) are processed in parallel.
4. (currently amended) A decoder for decoding data, said decoding comprising iterations with some steps (SISO1, SISO2) using windows [[(WID)]] of input data, characterized in that it comprises computation units [[(CMP)]] for performing, for a current window [[(WID)]] of a step (SISO1, SISO2) within an iteration:

A forward recursion, wherein said forward recursion is initialized with a forward state metric vector (α) from [[the]]an upper stake [[(STK)]] of a previous window of [[the]]a same step (SISO1, SISO2) of a previous iteration, [[a]]each window [[(WID)]] comprising a lower and [[an]]said upper stake [[(STK)]], wherein the lower stake comprises a lower metric vector initialization value independent of time and the upper stake comprises an upper metric vector initialization value independent of time; and

A backward recursion, wherein said backward recursion is initialized with a backward state metric vector (β) from the lower stake [[(STK)]] of a next window of the same step (SISO1, SISO2) of a previous iteration.
5. (original) A receiver adapted to receive input data, said input data being processed by the decoder as claimed in claim 4.
6. (original) A computer program product for a receiver, comprising a set of instructions which, when loaded into said receiver, causes the receiver to carry out the method as claimed in claims 1 to 3.

7. (original) A computer program product for a computer, comprising a set of instructions which, when loaded into said computer, causes the computer to carry out the method as claimed in claims 1 to 3.
8. (previously presented) A decoder for decoding data, as claimed in claim 4, said decoding characterized in that the forward state metric vector (α) computed last is stored in an upper stake of said current window during the forward recursion, and the backward state metric vector (β) computed last is stored in the lower stake of said current window during the backward recursion.
9. (previously presented) A decoder for decoding data, as claimed in claim 4, said decoding characterized in that all the windows of a step are processed in parallel.
10. (previously presented) A method as claimed in claim 1, characterized in that the backward recursion is initialized with a metrics vector computed by a termination generator, wherein the metric vector is a function of tail bits, and is processed.
11. (previously presented) A decoder for decoding data, as claimed in claim 4, said decoding characterized in that the backward recursion is initialized with a metrics vector computed by a termination generator, wherein the metric vector is a function of tail bits, and is processed.